

REMARKS**I. Introduction**

Claims 36-40 are presented for examination. Claims 7-12 and 35 have been canceled. Claims 38-40 have been added.

Claim 36 has been amended to state that Applicants' compounds have an acid number of at least 133. Literal support for this amendment is found in Example 1, p. 13, line 26 of the specification whereby it states that the starting material for synthesis of the compound in the example has a carboxylic content of 13.7%. The resulting compound has a carboxylic content of 10.57%, which converts to an acid number of 133.9. No new matter has been added.

II. Claim Rejections - 35 U.S.C. § 112, Second Paragraph

Claims 7-12 and 35 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 7-12 and 35 have been canceled, thus rendering the ground of rejection with respect to these claims moot.

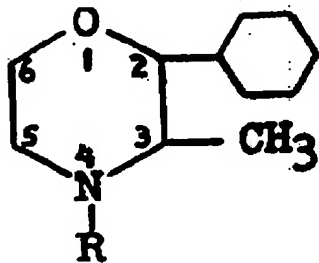
III. Claim Rejections - 35 U.S.C. § 102**A. Bogan et al. (U.S. Pat. No. 4,590,265)**

Claims 7-12, 35, and 36 were rejected under 35 U.S.C. 102(b) as being anticipated by Bogan et al. (U.S. Pat. No. 4,590,265). Claims 7-12, and 35 have been canceled, thus rendering the ground of rejection with respect to these claims moot.

The Examiner states that Bogan et al. disclose a chemical modification of a cellulose ester by oxidizing the primary hydroxyl group at the C₆ position of the anhydroglucose ring of the cellulose ester to produce a carboxylated cellulose ester which meets the carboxyl content set forth in the instant claims. (Office Action, p. 4). The Examiner further states that the structure of the carboxylated cellulose acetate butyrate at the bottom of column 16 of the Bogan et al. patent anticipates the oxidized cellulose ester of formula II set forth in claim 36 when X represents H, when R' and R'' represent (CH₂)_nCH₃, n is 0 or 2; when w is 1; and when x' and y are 0.1-1.9. (Office Action, p. 4).

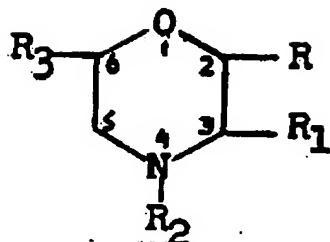
A rejection under 35 U.S.C. § 102(b) for anticipation, such as made by the Examiner in the instant case, necessarily implies that the invention sought to be patented has been, "patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States," and therefore is not "new" - that there are no differences between what is claimed and what is disclosed in the prior art. Bearing this legal standard in mind, it is apparent that Bogan does not specifically name, describe or claim any particular, individual compound anticipating Applicant's claims, nor is there any suggestion by Bogan that any of its disclosed compounds is biodegradable, and therefore capable of being used for any of Applicant's intended purposes, for example, as a monolithic transparent film or biodegradable film coating.

The facts at hand are analogous to those presented in Application of Kalm, 378 F.2d 959 (CCPA 1967), a case of binding authority in this matter (a copy of which is enclosed for the Examiner's convenience). In Kalm, the claimed invention related to particular morpholine derivatives of the formula:

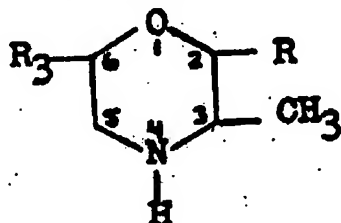


wherein R for purposes here is lower alkyl, being so defined in claim 1 and 2. Kalm, 378 F.2d at 960. Claim 3 was directed to the specific compound 2-cyclohexyl-3, 4-dimethylmorpholine. Id. According to the specification, Kalm's compounds were described as being useful as "selective central nervous system [CNS] depressants - being potent barbiturate potentiators." (Emphasis supplied). Id. According to Siemer, the compounds he disclosed had "a most marked anti-depressive action." Id. at 961.

The examiner rejected claims 1-3 under 35 U.S.C. § 102(e) as being anticipated by the Siemer patent, which disclosed a process for the preparation of compounds of the generic formula:



where R is phenyl or cyclohexyl, R₁ is lower alkyl, and R₂ and R₃ may be hydrogen or lower alkyl, as well as a "one step" process for preparing compounds of the formula:



Kalm, 378 F.2d at 960-61.

The CCPA (predecessor to the Federal Circuit) reversed the examiner and Board's rejection of the claims 1-3 under Section 102, stating that there appeared to be "no question that the Siemer patent does not specifically name, describe or claim any particular, individual compound anticipating appellant's claims, nor is there any suggestion by Siemer that any of his disclosed compounds is capable of depressing the central nervous system. Kalm, 378 F.2d 959, 962 (CCPA 1967). The Court noted that it was the Patent Office's position that Kalm's claimed compounds fell within the scope of the "genus" disclosed by Siemer. Id. at 962-63. The Court disagreed. Instead, the Court determined that Siemer's genus was limited to compounds possessing properties "diametrically opposite" to the properties possessed by Kalm's genus of compounds. Id. at 963. The Court added:

While it is not necessary that a reference disclose every property or attribute of a composition of matter to be a valid anticipation, appellant has found properties for his claimed compounds which are totally incompatible and inconsistent with, not merely complementary or in addition to, those attributed by Siemer to his compounds. It is our view that Siemer never intended to, nor does he, disclose compounds within the scope of appellant's claims.

Id.

In the present application, the Examiner argues that the compound displayed at the bottom of column 16 of Bogan discloses each and every limitation of one of Applicants' formula II species. The Examiner makes this rejection even though the compound displayed is described as being only a "segment" of the final carboxylated product achieved when cellulose acetate butyrate is employed as the starting material. (Col. 16, lines 47-50). The final carboxylated product is not biodegradable, unlike Applicants' claimed compounds. (Supp. Decl. V. Kumar, para. 10-11). As noted on pp. 3-4 of the specification, Bogan's compounds are synthesized by ozonolysis of cellulose esters, resulting in non-biodegradable carboxylated cellulose esters.

Furthermore, Applicants have amended claim 36 to provide that the biodegradable compounds have an acid number of at least 133. In contrast, Bogan's compounds, including the compound shown at the bottom of column 16, do not have an acid number of above 50, with 15-25 being the preferred acid number range. (Col. 15, lines 42-47).

The Examiner argues that Applicants' point that the entire Bogan compound is not biodegradable is not relevant, "since the rejection of the instant claims is based only on the structure at the bottom of column 16 of the Bogan et al. patent." (Office Action, p. 6). The Examiner cannot consider only a portion of the entire compound for purposes of the anticipation analysis and pretend that the rest of the compound does not exist simply because the patentee chose to not to illustrate the remaining portion of that particular compound. The reference must be considered for all that it actually teaches and discloses to persons skilled in the art, and that is a non-biodegradable, carboxylated cellulose ester. See e.g. Bausch & Lomb, Inc., v. Barnes-Hind/Hydrocurve Inc., 796 F.2d 443, 448, 230 USPQ 416, 419 (Fed. Cir. 1986), cert. denied, 484 U.S. 823 (1987); In re Kamm, 452 F.2d 1052, 1057, 172 USPQ 298, 301-02 (CCPA 1972).

Here, it is the Examiner's position that Bogan's compound segment falls within the scope of the "genus" disclosed by Applicants'. This is legally inconsistent, however, with the Federal Circuit precedent cited above, since Bogan is limited to compounds possessing properties "diametrically opposite" to the properties possessed by Applicants' genus of compounds, i.e. non-biodegradable compounds having an acid number of 50 or less versus Applicants' biodegradable compounds having an acid number of at least 133. As in the Kalm case, Applicants have discovered properties for their claimed compounds which are totally incompatible and inconsistent with, not merely complementary or in addition to those attributed by Bogan to his

compounds. Bogan never intended to, nor does he disclose compounds within the scope of Applicant's claims. For all of these reasons, claim 36 is not anticipated by Bogan.

Claim 36 is also not rendered obvious by Bogan. In this respect, there is no teaching or suggestion in Bogan to prepare biodegradable oxidized cellulose esters having an acid number of 133 or above.

New claims 38-40 are directed to various products that incorporate Applicants' novel biodegradable oxidized cellulose esters, including:

- A monolithic transparent film (claim 38);
- A biodegradable film coating (claim 39);
- A pharmaceutical formulation (claim 40);
- An agricultural product (claim 40); and
- A veterinary composition (claim 40).

Claims 38-40 are not anticipated by Bogan et al. The Examiner argues that the carboxylated cellulose acetate butyrate starting material at the bottom of claim 16 anticipates Applicants' claimed biodegradable oxidized cellulose esters as set forth in formula II. The Examiner argues that, "[l]imitations in the instant claims regarding the presence of the oxidized cellulose in a monolithic transparent film, a biodegradable coating, a pharmaceutical, an agricultural product, or a veterinary composition...do not make the claimed oxidized cellulose ester patentable since a difference in intended use cannot render a claimed composition novel." (Office Action, p. 5). New claims 38-40, however, are not directed to the intended use of the oxidized cellulose, but to the products themselves in which the oxidized cellulose is incorporated. Thus, claims 38-40 are structurally differentiated from Since Bogan et al. do not teach Applicants' claimed oxidized cellulose esters along with a film coating, pharmaceutical formulation, monolithic transparent film, agricultural product, or veterinary composition, claims 38-40 are not anticipated by Bogan et al.

Claims 38-40 are also not rendered obvious in view of Bogan et al. Specifically, there is no suggestion or motivation in Bogan et al. to incorporate the carboxylated cellulose acetate butyrate starting material in the structures and products defined by claims 38-40.

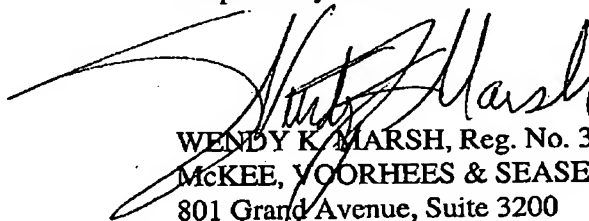
With respect to new claim 41, Formula II states that X cannot be H. Bogan et al. therefore does not anticipate claim 41. Bogan also does not render claim 41 since, as already extensively argued above, Bogan does not teach or suggest the formation of a biodegradable oxidized cellulose ester.

IV. Conclusion

It is believed the application is in a *prima facie* condition for allowance. Allowance is therefore respectfully requested.

This is a request under the provision of 37 CFR § 1.136(a) to extend the period for filing a response in the above-identified application for two months from June 25, 2005 to August 25, 2005. Applicant is a small entity; therefore, please charge Deposit Account number 26-0084 in the amount of \$225.00 to cover the cost of the two-month extension. Please also charge Deposit Account No. 26-0084 the amount of \$100.00 for one new independent claim over three. Any deficiency or overpayment should be charged or credited to Deposit Account 26-0084.

Respectfully submitted,



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